CLAIMS

1. An amplifier circuit comprising:

a generating section that generates a first local signal and a second local signal which are used in frequency conversion of a first constant-envelope signal and a second constant-envelope signal having respective predetermined phases, the first local signal and the second local signal having a 180° phase difference therebetween;

a frequency conversion section that performs frequency-conversion of the first constant-envelope signal and the second constant-envelope signal using the generated first local signal and second local signal;

an amplifying section that amplifies the frequency-converted first constant-envelope signal and second constant-envelope signal; and

a combining section that combines the amplified first constant-envelope signal and second constant-envelope signal.

2. The amplifier circuit according to claim 1, further comprising a local signal phase adjustment section that adjusts a phase of at least one of the generated first local signal and second local signal.

3. The amplifier circuit according to claim 2, further comprising: a detecting section that detects a level of leakage of the local signals in an output signal obtained as a result of combining by the combining section; and

a phase control section that controls the local signal phase adjustment section in such a manner that the detected level is minimized.

4. The amplifier circuit according to claim 1, further comprising a local signal amplitude adjustment section that adjusts an amplitude of at least one of the generated first local signal and second local signal.

5. The amplifier circuit according to claim 4, further comprising: a detecting section that detects a level of leakage of the local signals in an output signal obtained as a result of combining by the combining section; and an amplitude control section that controls the local signal amplitude adjustment section in such a manner that the detected level is minimized.

6. The amplifier circuit according to claim 1, further comprising a constant-envelope signal phase adjustment section that adjusts a phase of at least one of the frequency-modulated first constant-envelope signal and second constant-envelope signal.

7. A wireless base station apparatus comprising the amplifier circuit according to claim 1.

8. A wireless terminal apparatus comprising the amplifier circuit according to claim 1.